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## ABSTRACT

This report combines and summarizes four 1972 student studies of some of the relationships between the University of California, Berkeley subject catalog and the Library of Congress (LC) subject authority list. It was found that about 10% of the subject headings used at Berkeley were out of date according to the LC list. About 50% of the subject headings were unauthorized by the LC list and rules. Approximately 40% of the Berkeley subject were exact matches with the subject headings given in the LC authority list and could therefore be printed out from a computer tape file of this list and used in the catalog directly without modification. (Author)

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## Final Report

Summary Report of Student Studies of the Subject Headings  
Used in the University of California, Berkeley Subject Catalog

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## ABSTRACT

This report combines and summarizes four 1972 student studies of some of the relationships between the University of California, Berkeley subject catalog and the Library of Congress subject authority list. It was found that about 1% of the subject headings used at Berkeley were out of date according to the LC authority list. About 5% of the subject headings were unauthorized by the LC list and rules. Approximately 40% of the Berkeley subject headings were exact matches with the subject headings given in the LC authority list and could therefore be printed out from a computer tape file of this list and used in the catalog directly without modification.

## TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT . . . . .	i
I. INTRODUCTION . . . . .	1
II. OBJECTIVES . . . . .	2
III. METHODOLOGY . . . . .	4
IV. RESULTS. . . . .	5
A. Currency of Subject Headings Presently in Use.....	5
B. Extent of Use of Subject Headings Unauthorized by LC....	5
C. Extent of Exact Matches of UC Subject Headings With Entries in the LC Authority List Tapes.....	6
V. SUMMARY. . . . .	7

## I. INTRODUCTION

In the fall of 1972 four separate and relatively independent studies were made of the use of LC subject headings in the University of California Berkeley Main Library catalog, which is the union catalog for both the main library and all the branches. The studies were done by students in partial fulfillment of the requirements of course L274 (Systems Analysis) taught by Charles Bourne in the School of Librarianship, Berkeley. The students worked in four independent groups, as shown below with each group's leader listed first:

Group A: Assad Busool, Dianne Shirley, Don Thompson  
Group B: Don Hoffmeister, Borut Dekleva, Jo Robinson  
Group C: Charles Martell, Eric Brauss, Gary Shirk  
Group D: Ken Weeks, John Richmond, Judy Todd

Each of these groups prepared their own reports for limited class use. However, because the results of their study efforts appeared to be of interest to others, it was decided to consolidate their data and distribute the findings in a more formal report. ILR was involved in the study primarily to help with the consolidation and distribution of these research results.

## II. OBJECTIVES

In general, the students attempted to determine the relationship between the UC Berkeley catalog's subject headings and those prescribed by the Library of Congress. They were instructed simply to: (1) determine the extent to which the UC subject headings are out of date relative to LC, and (2) determine the fraction of subject headings used by UC which are actually included in the LC authority list\* and which therefore correspond to ILR's computer tape file of LC subject headings. Two of the four groups decided also to examine a broader question: what fraction of the subject headings now used by UC are not authorized by either the LC list or the LC rules which direct local construction of subject headings.

Each of the groups proceeded to do their studies in somewhat different ways. They used different sampling techniques aimed at answering the questions as they interpreted them--which differed to some extent between the groups. Therefore, the results of each of the separate studies could be combined to different degrees in presenting a collective answer to the various questions. Summarily, each of the groups addressed themselves to some or all of the following questions:

- 1) What percentage of the subject headings now in use are out of date?
- 2) What percentage of the subject headings now in use are not authorized by LC?
- 3) What percentage of the subject headings now in use are exact duplicates of the headings given in the LC authority list?

The first objective was prompted by an interest in determining to what extent the language of the UC catalog's subject headings had changed to reflect the times. More specifically, this was a determination of the extent to which the UC catalog subject headings had kept pace with changes in LC subject headings. For example, "airports" should now be used instead of "aerodromes."

The second, broader objective was prompted by an interest in seeing how closely the UC subject headings correspond to those allowed or authorized by the LC list and rules. The LC list of subject headings does not include every possible legitimate heading; rather, it lists many and gives

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\* In this paper the phrase "LC authority list" designates the LC 7th edition and the 1966-1971 supplements together: U.S. Library of Congress. Subject Cataloging Division. Subject Headings Used in the Dictionary Catalogs of the Library of Congress from 1897 to June 1964. Seventh Edition, Washington, 1966. California. University. University-Wide Library Automation Program. Library of Congress Subject Headings: Supplements, 1966-1971. Berkeley, Institute of Library Research, 1972.

precise directions as to how to construct others which are also permissible. Any other subject headings are not authorized. The precision of instructions on how to construct needed subject headings not actually listed makes uniformity between libraries possible, and makes it possible to know where references to items under a certain subject may be found. For example, the LC instructions make clear that the history of Great Britain during the Civil War should be written as follows: Gt. Brit.--History--Civil War, 1642-1649. If the library has instead, Gt. Brit.--Hist.--1642-1649 (Civil War), then entries under this subject heading may be filed in a different location in the catalog, thus effectively losing those records--or at least making it difficult to find them.

The third objective was related to a proposed effort to use a computer tape equivalent of LC Subject Headings--7th edition plus the 1966-1971 supplements to print subject heading guide cards that could be placed in the catalog. Using the LC subject heading tape would have the following advantages: 1) simplification of manual searching, 2) elimination of the need to type the headings for some cards in the future, 3) provision of an easier means of changing subject headings in the catalog. Thus there was a need to find out what fraction of the subject headings actually used now in the catalog could be printed out from the computer tape and used directly without modification.

### III. METHODOLOGY

Each of the four groups sampled the UC subject catalog in slightly different ways and gathered the data according to slightly different categories. In spite of these differences, however, the methods were compatible to the extent that parts of the data collected by each group can be combined to answer the above mentioned three questions.

Group A gathered a sample of 337 items by choosing one card approximately 3-1/2 inches from the back of every sixth drawer in the subject catalog. The subject headings from the samples chosen were then compared with the LC authority list to determine whether they were exact or partial duplicates.

Group B gathered a sample of 380 items from the subject catalog and compared them with the LC authority list. The exact methodology for this group was not given in their report.

Group C gathered a sample of 407 subject headings by sampling every fifth drawer in the subject catalog. That heading which appeared approximately 3 inches from the last card in the drawer was the one chosen. These were then compared with the LC authority list.

Group D gathered a sample of 677 items by selecting the card one inch from the back of every third drawer in the subject catalog and compared these with the LC authority list.



#### IV. RESULTS

##### A. CURRENCY OF SUBJECT HEADINGS PRESENTLY IN USE

A subject heading was considered current if it corresponded to the heading currently recommended by LC. It was considered out of date if it corresponded to an older heading which LC formerly used but which LC has since abolished. (For example, "Children, Abnormal and backward" and "Confucius and Confucianism - China.") A subject heading would also not be current relative to the LC authority list if it was "ahead" of LC's list. (For example, "Roofs, Concrete.") Very few instances of non-current subject headings were found.

Three of the groups addressed themselves to this issue, with the following results:

<u>Group</u>	<u>Sample Size</u>	<u>Number of Subject Headings Not Current</u>	<u>Percent of Subject Headings Not Current</u>
D	677	11	1.60
C	407	1	.24
A	<u>337</u>	<u>1</u>	.30
Total:	1421	13	

Combining these results yields a total sample size of 1421 and an average percent out of date of 0.9 percent.

##### B. EXTENT OF USE OF SUBJECT HEADINGS UNAUTHORIZED BY LC

An unauthorized subject heading was defined as a heading which did not appear in the LC list and which was not authorized or permitted by the LC rules. Unauthorized subject headings would include not only those which are out of date but many others as well. One example was an instance in which the main part of the heading corresponded to an LC heading, while the subheading was not formulated according to LC rules. For example, the UC card catalog has the following unauthorized headings: Canada--Army--Officers' handbooks. LC prescribes instead the following form: Canada. Army--Officers' handbooks. The earlier mentioned inversion in the subheading for the history of Great Britain in the Civil War is another example of an unauthorized heading.

Only two of the groups presented data which could be combined to bear on the question of the extent of unauthorized subject headings. The results were:

<u>Group</u>	<u>Sample Size</u>	<u>Number of Unauthorized Subject Headings</u>	<u>Percent of Unauthorized Subject Headings</u>
D	677	36	5.3
A	<u>337</u>	<u>16</u>	5.0
Total	1014	52	

Combining these figures gives a total sample size of 1014 items. An average of the data yields 5.1 percent subject headings unauthorized by LC authority list and rules.

Group D presented the data so that a further breakdown of this category was possible. Group D's 36 unauthorized subject heading fell into the following three categories:

- 1) Correspondence with LC except for inversion in a subheading.

Example:

UC: Gt. Brit.--Hist.--1642-1649 (Civil War)

LC: Gt. Brit.--History--Civil War, 1642-1649

Seven instances of this type were found, or one percent of the total 677 sampled.

- 2) Correspondence of heading, but local subheading not authorized by LC rules. Examples found in UC which have unauthorized subheadings are the following:

Belgium--Colonies--Periodicals, Societies, etc.

Canada--Army Officers' handbooks

Eighteen such cards were found in the total sample of 677 representing 2.7% of this sample. This type of discrepancy makes up about half of the unauthorized subject headings found by this group.

- 3) Local headings which are not current with the LC list and rules. The examples mentioned earlier ("Roofs, Concrete" and "Children, Abnormal and backward") fall into this category. Group D found eleven such records, which represents 1.6% of the total sample of 677 items.

#### C. EXTENT OF EXACT MATCHES OF UC SUBJECT HEADINGS WITH ENTRIES IN THE LC AUTHORITY LIST TAPES

All four groups gathered data to answer the question of the extent of exact matching with the LC authority list. The results were:

<u>Group</u>	<u>Sample Size</u>	<u>Number Found in LC Authority List</u>	<u>Percent Found in LC Authority List</u>
D	677	273	40.3
C	407	170	42.0
B	392	146	37.2
A	<u>337</u>	<u>148</u>	44.0
Total	1813	737	

Combining these results yields a total sample size of 1813; the average percent of subject headings which are exact matches with those found in the LC list is then 40.7 percent.

While the group results given above were assumed to be compatible and therefore capable of being combined as stated, it is not certain that they are truly compatible. This is because none of the groups clearly defined their interpretation of the phrase "exact match" or "exact duplicate" in the original reports. Group D did state that differences of an abbreviation only were ignored. (For example, LC gives the following heading: New Zealand--History. UC has instead, New Zealand--Hist. This would count as an exact match for Group D.) It is not clear whether differences in punctuation or upper-versus lower-case letters were counted. Moreover, since none of the groups recorded any of these sorts of discrepancies, it is not known whether any were encountered. The different groups' results were quite comparable, however. (None of the individual group percentages of exact matches varied from the combined average by more than 3.5 percentage points.) This would seem to indicate that either there were very few ambiguous items in the samples or else each of the groups was tabulating the data according to the same or very similar unwritten definitions of "exact duplicate"--or else both factors were operating. At any rate, the statement that approximately 40% of UC Berkeley's subject headings are exact duplicates of those found in the LC authority list and could therefore be generated by dumping computer tapes of the LC subject headings should be interpreted in light of this uncertainty in the data tabulation methods of the four studies.

## V. SUMMARY

Four studies of the UC Berkeley subject catalog were compared and their results combined where possible to answer certain questions about the relationship between the subject headings in that catalog and those listed or authorized in the LC authority list. It was found that approximately one percent of UC's subject headings were actually out of date, according to the LC authority list. About 5 percent of the subject headings were not authorized by LC rules. Approximately 40 percent of the subject headings were exact matches with the subject headings as given in the LC authority list, and could therefore be printed out from the computer tape file and used in the catalog directly without modification.